

## NIDIS CAROLINAS DROUGHT IMPACT REPORTING

NOTE: *This project description is expected to evolve as we gather more expert and stakeholder input*

### Committee:

- Bob Boyd, Division of Emergency Management, NC Dept. of Public Safety
- Ryan Boyles, State Climate Office of North Carolina, North Carolina State University
- Chris Crew, Division of Emergency Management, NC Dept. of Public Safety
- Callion Maddox, Division of Emergency Management, NC Dept. of Public Safety
- Hope Mizzell, South Carolina State Climatology Office
- Geoff Scott, NOAA Center for Coastal Environmental Health and Biomolecular Research
- Kelly Helm Smith, National Drought Mitigation Center
- Zhenghong Tang, University of Nebraska – Lincoln
- Jess Whitehead, South Carolina Sea Grant Consortium/North Carolina Sea Grant
- Maria Whitehead, The Nature Conservancy, SC, Winyah Bay and Pee Dee River Basin

**Goal:** Assess ways in which drought impacts might be monitored through stakeholders and citizen science engagement and investigate ways to improve the communication of coastal ecosystem drought impacts.

**Background:** Drought impacts in the Carolinas coastal ecosystems are poorly understood (Gilbert et al, 2012: *The Impact of Drought on Coastal Ecosystems in the Carolinas*). The benefits of improving drought impact reporting include improved drought monitoring, building stakeholder awareness and engagement, and building linkages between drought indicators and impacts. The current understanding of drought impacts and economic benefits of preparedness activities related to the NIDIS pilot, mitigation and planning strategies were noted as need and gaps which would be addressed by the project.

### Questions Raised and Participant Comments:

- (1) What drought impact reporting lessons can we learn from citizen science programs already in place? Participants suggested that existing drought impact reporting programs be considered for use with stakeholders and interested groups. Significant examples of these programs include:
  - the Community Collaborative Rain, Hail & Snow Network - CoCoRaHS (<http://www.cocorahs.org/>), which already includes drought impact reporting
  - the National Drought Impact Reporter (<http://droughtreporter.unl.edu/>)
  - the National Phenology Network (<http://www.usanpn.org/>)
  - Arizona's Drought Impact Reporter (<http://azdroughtwatch.org/faces/xhtmll/index.xhtmll>)

- Longer term goals may include assessment of additional methods for reporting impacts and development of state-wide impact reporting tools and/or mobile applications.
- (2) Participants suggested that information which would be helpful to the North Carolina Drought Management Advisory Council and South Carolina Drought Response Committee for their drought assessments might be considered as a factor in determining stakeholder groups who might be involved as well as the types of programs to use which will be most useful in providing that information. Additional questions to answer regarding this point include:
- What is the best way to communicate drought impacts to these state-level advisory committees?
  - Would drought monitor authors find more input from coastal ecosystem regions helpful?
  - What other groups would benefit from increasing this type of drought impact reporting?
- (3) Workshop participants noted that consistent engagement of stakeholders and citizens has been a recurring problem in developing these impact reporting tools.
- This comment led to consensus that it will be important to engage stakeholders who benefit from drought impact reporting. People won't take the time to report impacts if there is no payoff for them.
  - Participants pointed out that a first step in this process will be education to inform stakeholders of the existence of these programs and tools. Low levels of involvement may only be a function of limited knowledge of the existence of the tools, rather than a reluctance to engage.
  - Baseline observations from stakeholders may be the first step in the process of engagement, as drought impacts can only be recorded in the presence of a drought. Therefore, communicating the importance of baseline observations for use in future evaluation of drought impacts will be key.
- (4) Participants suggested that, initially, efforts might most usefully begin by engaging a specific group of stakeholders, such as land managers, who could report drought impacts that would be summarized and communicated to other stakeholders. As the project evolves, assessment of the success of this strategy could be used to further develop future engagement and project development.
- (5) Existing mobile applications are a tool which could be considered for ease of use in recording observations in the field.

### **Potential partnerships:**

National Drought Mitigation Center (NDMC)  
 North Carolina Drought Management Advisory Council  
 South Carolina Drought Response Committee  
 NERRs and other public land managers

**Synergies with other NIDIS-Carolinas projects:**

The work from this project will become a key component in the drought indicators and indices project. It was mentioned several times at the workshop that we need a way to relate drought indices and indicators to drought impacts.

Increased reporting of drought impacts could also enhance the work of the seafood safety forecast project.

**Next steps:**

Establish a steering committee

Steering committee planning calls and brainstorming

Plan a workshop for stakeholder input

Determine if stakeholders are aware of existing ways to report impacts and the ease of access to these ways